Montana State Library

Agency IT Plan

FOR FY2010 - FY2015 IT PLAN UPDATE

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INFORMATION TECHNOLOGY SERVICES DIVISION

Dick Clark, CIO

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January 7, 2010

TABLE OF CONTENTS

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Introduction

The mission of the Montana State Library (MSL) is to meet the information needs of Montana state government management and staff, to ensure that all Montana citizens have access to information created by their government, and about their natural environment, to support the role of all Montana libraries to deliver quality library content and services to their patrons, and to ensure that Montanans who are blind and physically handicapped are provided access to library resources.

Information technology (IT) is an essential resource required for MSL to meet its mission and statutory requirements. IT is integrated into nearly every function of the State Library, from the creation and storage of digital content to the delivery of library services in numerous forms. The programs of the library rely heavily on the State network, on MSL's servers and file storage, on library partners that provide e-Content and on Internet technologies to support our business goals.

Current Business Drivers

The maintenance and development of MSL information systems are directly tied to current and planned business needs which include but are not limited to the following:

- The Montana Natural Resource Information System (NRIS) launched the Montana GIS Portal in 2008. In the coming fiscal year NRIS will replace the Montana Digital Atlas and Topofinder applications with solutions based on ESRI's ArcGIS Server platform. This project will increase information sharing opportunities among GIS data producers and consumers as part of the state's overall strategy for building a federated GIS enterprise.

- The Library Information Services (LIS) program is engaged in a long-term project to digitize our entire print state publications legacy collection (55,000 volumes). LIS is also investigating a distributed preservation infrastructure know as LOCKSS (Lots of Copies Keep Stuff Safe) to distribute and archive this digital content among with our partners.

- The Talking Book Library (TBL) is gradually converting its collection of books on tape from analog to digital media to meet user demands and to remain current with TBL's national counterparts. This will require storage solutions that can accommodate increased storage demands for new digital content.

- The Statewide Library Resources (SLR) Division continually seeks ways to meet rising library patron demands by increasing available e-Content services. SLR facilitates access to online content or e-Content for Montana libraries through statewide subscriptions for online databases, downloadable resources services, and other online resources. The division is now actively engaged in the world of social media as a way to further facilitate communication with library patrons and partners. SLR partners with library vendors and organizations and facilitates the creation of cooperatives and consortia of libraries around the state. These partnerships create value-added opportunities at reduced costs to libraries for resources, training and consulting services to libraries throughout the state.

- While in the future MSL plans to co-locate some or all of our servers and digital storage with other state agencies in the State of Montana Data Center (SMDC),

we face the near-term problem of upgrading and maintaining our web servers and file storage needs until the SMDC is ready for state agency occupancy.

MSL IT Goals:

Strategic Information Systems Alignment

As MSL evaluates opportunities that arise as our legacy information systems reach the end of their life cycles, we are using this opportunity to better align our current IT resources to our business needs, reduce unnecessary overhead and redundancy of systems and more efficiently and effectively use personnel, financial and IT resources to meet MSL business needs. Objectives to support this goal are outlined in IT Goal 1: Align information system resources with MSL program and service needs.

Development and Maintenance of Information Systems

Unlike IT Goal 1 which emphasizes the need to realign and consolidate information systems as appropriate, IT Goal 2 focuses on the need to further develop and maintain critical information systems through their life cycles both by properly administering hardware and software and also through project management and collaboration with IT colleagues. IT Goal 2 states: Develop and maintain current and new information systems that are properly aligned with MSL program and service needs.

MSL in the Online Environment

MSL patrons and partners demand the convenience of information available to them via the web. To meet this demand MSL focuses a significant portion of our IT resources on expanding and improving online information services as is reflected in IT Goal 3.

Of note, delivery of e-Content is now a vital role for MSL. MSL subscribes to online periodical databases for our own patrons and facilitates access to e-Content through statewide and consortia-based purchases that provide databases, downloadable audio and other web-based services. Additionally, MSL manages statewide contracts that benefit libraries around Montana by providing software as service applications that libraries use to manage their bibliographic holdings, provide access to historic digital content, answer reference questions via the web and several other services. Librarians have long argued that they should be seen as IT staff in many regards. MSL has chosen to include these e-Content (or software as service) elements of our overall services in this year's IT Plan to demonstrate the significant IT nature of these services.

Information Systems Security and Disaster Recovery Planning

Though information systems security and disaster recovery planning are critical elements of the development and maintenance of MSL information systems as described in Goal 2, because of the resource commitment necessary to successfully undertake these initiatives, they have been given their own IT Goal. IT Goal 4 states: Develop business continuity and security programs.

IT Staff Resources

Like many state agencies, MSL continues to struggle to retain qualified IT staff. IT Goal 5 addresses this concern: Improve MSL's ability to attract and retain a qualified IT workforce.

Because MSL is a small agency, our information technology projects generally do not meet the definition of Strategic IT Initiatives as determined in this document. Nonetheless, each is critical to our patrons and partners and thus deserves the highest degree of professionalism in planning, implementation, ongoing administration and care. MSL's sole IT initiative, which remains pending, is a special project to complete our ongoing initiative to digitize our legacy print collection of State Publications and to make the contents of the digital collection available online. MSL is currently 18 months into this multi-year project. Though currently funded through existing dollars, MSL may seek additional funding through the Executive Planning Process, to complete the project in a more timely and efficient manner. This initiative directly supports Goal 3: Expand and improve online information services.

Finally, over the next two years, MSL will undertake a review and update of our strategic plan: Montana State Library Strategic Plan 2006-2011; as the goals and objectives of the agency changes, so too will our IT objectives. Those changes will be reflected in future updates to this document.

SECTION 1: AGENCY CONTACT INFORMATION

Agency Name: Montana State Library

Role: Plan Owner

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SECTION 2: AGENCY IT MISSION

2.1 Agency IT Mission Statement

The Montana State Library (MSL) effectively employs information technology to acquire, manage and provide access to library content and library services in order to meet the information needs of Montana government agency management and staff, to ensure all Montana citizens have access to information created by their government, to support the role of all Montana libraries to deliver quality library content and services to their patrons, to work to strengthen local community public libraries and to ensure that Montanans who are visually or physically handicapped are provided access to library resources. The Montana State Library's information technology resources support the business objectives of the agency in a manner that is reliable, efficient, cost-effective and secure.

SECTION 3: AGENCY SECURITY PROGRAM

3.1 Security Program

Information Systems Security Program: MSL, and our designated Security Officer, Jennie Stapp, continues to partner with the Information Systems Security Bureau Chief to understand and develop an Information System Security Program for MSL critical business processes that complies with the State of Montana Standard based on the National Institute Standards and Technology (NIST) Special Publications 800-100, Revision 2 (NIST SP800-100) Information Security Handbook: A Guide for Managers, utilizing the Risk Management Framework outlined in National Institute Standards and Technology Special Publication 800-39 (NIST SP800-39) Managing Risk From Information Systems. It is the goal of MSL to have a fully-documented security plan in place for one identified MSL business system by the end of FY11. The primary constraint to fully implementing a NIST-compliant Information System Security Program is staffing. MSL does not have FTE to dedicate to information security.

Physical Access: MSL computer systems, other than personal desktop computers, are confined to the MSL data center on the 2nd floor of the Justice/State Library building. Access is limited to IT personnel with individually-assigned keypad codes. When a non-authorized person requires access to the MSL data center, they are accompanied at all times by an authorized person.

Remote Access: As allowed for by the Remote Access for Employees and Contractors standard, approved November 20, 2001, remote access is granted on a limited, case-by-case basis to employees and approved contractors or partners for the benefit of the State of Montana and not for personal benefit or use. Approval for remote access must be granted in writing by the agency Security Officer. Remote access to state computer resources by unauthorized users is considered a security violation. Remote access users are obligated to abide by all computing policies of the state and MSL.

User Rights: As allowed for within the confines of MSL business practices, MSL complies with the interim standard on user rights that became effective May 30, 2007. We understand that our users should only have the minimal rights necessary to perform their job duties, and that we must report the number of users with standard user accounts, local admin accounts, and network admin accounts. We have begun to limit the number of users who have local administrator rights. We must balance this, however, with our need to provide IT support to libraries with software and applications that differ from those approved by the State. Additionally, MSL staff often needs to test emerging technologies that may be used by libraries to provide improved services to their patrons.

Virus Protection: MSL complies with all related directives from ITSD regarding security updates and patches. MSL utilizes the State of Montana standard NOD32 virus protection for all workstations and servers. Additionally, MSL adheres to a

monthly scheduled maintenance plan to ensure that all services are in compliance with security updates.

Web Servers: MSL understands that, following a recent ITSD reorganization, responsibility for ENT-SEC-012 Internet/Intranet Security has been transferred to the agencies. Therefore, MSL performs standard security checks on Web Servers before they are made accessible to the public. MSL also reviews and complies as necessary with all requests for additional information and directives from ITSD regarding security notices and patches.

Breaches: Security breaches, or suspicion of security breaches, will be reported to the ITSD by the MSL Security Officer. Should a breach occur, MSL IT personnel have been instructed to remove the breached system from the state network and await further instructions from ITSD.

SECTION 4: AGENCY IT PLAN – GOALS & OBJECTIVES

4.1 Goals

Goal Number 1: Align information system resources with MSL program and service needs

ITG 1   Align information system resources with MSL program and service needs

Description: This on-going goal aligns current information system resources with MSL program and service needs and appropriately deploys information technology solutions within the scope of MSL strategic plan and personnel and financial resources

Benefits: MSL staff benefit by having the resources we need to carry out our work without overextending limited personnel and financial resources. MSL partners and patrons benefit by having reliable access to high quality content and services. Montana taxpayers benefit through tax savings associated with appropriate use of IT in government.

Which state strategic goal(s) and/or objective(s) does your goal address? 1, 2

Supporting Objective/Action

ITO 1-1   Evaluate information system resources currently maintained by MSL against MSL program and service needs to find opportunities for greater efficiency

Business driver: Limited and/or reduced personnel and financial resources means that MSL must find efficiencies in order to continue to maintain or improve services to meet user demands; there are efficiencies to be gained through thorough evaluation of current IT resource deployment.

Benefits: MSL staff benefit by having the resources we need to carry out our work without overextending limited personnel and financial resources. MSL partners and patrons benefit by having reliable access to high quality content and services. Montana taxpayers benefit through tax savings associated with appropriate use of IT in government.

Risks: None

Timeframe: Ongoing

Critical success factors:

- By October 2010 plan for and replace out-dated hardware including web servers, storage area network (SAN) and backup equipment with more efficient, cost effective alternatives. (Options currently being evaluated include virtual servers and an iSAN or Network Attached Storage (NAS) with onboard data backup). Decision-making factors include:
- Consolidation of redundant hardware such as web servers;

- Evaluation of available personnel and financial resources;
- Purchase of new hardware only when there is a clear program or service need that cannot be met with current infrastructure and if MSL has the resources to support additional infrastructure;
- Evaluation of the SMCD if services are available within the necessary timeframe;
- Evaluation of opportunities for virtualization as a means to meet the Governor's 20 x 10 Initiative, provide disaster recovery and cost effectively deploy services;
- Evaluation of asset management software which will offer application deployment, license management, hardware management and patch/security updates.

Supporting Objective/Action

ITO 1-2   Evaluate external IT resources against MSL program and service needs

Business driver: Limited and/or reduced personnel and financial resources means that MSL must find efficiencies in order to continue to maintain or improve services to meet user demands; there are efficiencies to be gained by utilizing information systems maintained by others.

Benefits: MSL staff benefit by having the resources we need to carry out our work without overextending limited personnel and financial resources. Further benefits may be found through the creation of new collaborative opportunities discovered as this goal is pursued. MSL partners and patrons benefit by having reliable access to high quality content and services. Montana taxpayers benefit through tax savings associated with appropriate use of IT in government.

Risks: External information technology resources must be flexible enough to meet MSL business needs as well as State information security standards. External resources may not be available in a time frame to meet MSL needs.

Timeframe: Ongoing

Critical success factors:

- Evaluate SMDC services that meet MSL program and service needs for efficiency and cost effectiveness;
- Evaluate for applicability, efficiency, and cost effectiveness common information systems, applications and shared services in other programs of state government; available from federal partners, from vendors and from other library partners;
- Evaluate new technologies that drive user expectations including mobile web applications, open source software and social media tools.

Supporting Objective/Action

ITO 1-3   Use the agency strategic planning process to identify priorities for new and/or expanded information systems

Business driver: Limited and/or reduced personnel and financial resources means that MSL must find efficiencies in order to continue to maintain or improve services

to meet user demands; there are efficiencies to be gained by strategically planning future MSL goals and objects and by aligning information systems to support those goals and objectives.

Benefits: MSL staff benefit by clearly knowing agency priorities for current and future goals and by having the resources they need to achieve those goals without overextending limited personnel and financial resources. MSL partners and patrons benefit by having reliable access to high quality content and services with more unique resources to meet a broader array of user expectations. Montana taxpayers benefit through tax savings associated with appropriate use of IT in government.

Risks: Limited staff and financial resources mean that MSL staff must prioritize programs and services offered; certain opportunities may not be pursued if resources do not allow.

Timeframe: Spring 2010 through fall 2011. MSL Strategic Plan to be completed by the end of 2011.

Critical success factors:

- MSL will complete a successful evaluation of the current strategic plan;
- With input from all MSL partners and staff MSL will develop a new strategic plan to take effect in 2012;
- Strategic plan will clearly identify goals and objectives that prioritize MSL programs and services to inform the development of current and future information systems.

Supporting Objective/Action

ITO 1-4   Encourage staff from all library programs to effectively collaborate across programs in order to use all library information system resources to meet the goals of MSL

Business driver: Limited and/or reduced personnel and financial resources means that MSL must find efficiencies in order to continue to maintain or improve services to meet user demands; there are efficiencies to be gained by taking advantage of the resources available in the unique programs managed by MSL.

Benefits: MSL staff benefit by having the resources we need to carry out our work without overextending limited personnel and financial resources. Further benefits may be found by effectively collaborating across programs as this goal is pursued. MSL partners and patrons benefit by having reliable access to high quality content and services with more unique resources to meet a broader array of user expectations. Montana taxpayers benefit through tax savings associated with appropriate use of IT in government.

Risks: Limited staff and financial resources mean that MSL staff must prioritize programs and services offered; certain opportunities may not be pursued if resources do not allow.

Timeframe: Ongoing

Critical success factors:

- By fall 2010 NRIS and Heritage will offer a suite of shared web mapping services that can be consumed by each other and well as library partners;
- By spring of 2011 MSL will offer at least one customized "natural resource kiosk" to libraries and library patrons. These kiosks use NRIS data and

applications to resolve library patrons' natural resource and geography information needs;

- By spring 2011 MSL will use GIS to offer limited analysis to libraries regarding patron demographics and other critical planning data.

Goal Number 2: Develop and maintain current and new information systems that are properly aligned with MSL program and service needs

ITG 2   Develop and maintain current and new information systems that are properly aligned with MSL program and service needs

Description: This on-going goal ensures the development and maintenance of information systems that are properly aligned with MSL program and service needs and appropriately deploys information technology solutions within the scope of MSL strategic plan and personnel and financial resources.

Benefits: MSL staff benefit by having the resources we need to carry out our work without overextending limited personnel and financial resources. Information systems and the associated resources are clearly justifiable; therefore personnel and financial resources are made available to ensure the long term success of the information systems. MSL partners and patrons benefit by having reliable access to high quality content and services. Montana taxpayers benefit through tax savings associated with appropriate use of IT in government.

Which state strategic goal(s) and/or objective(s) does your goal address? 1, 2, 4

Supporting Objective/Action

ITO 2-1   Maintain the MSL information technology plan

Business driver: Limited and/or reduced personnel and financial resources means that MSL must prioritize programs and services; thoughtful consideration to the corresponding information systems is a critical element for successful strategic planning.

Benefits: Clear planning aligns IT resources with MSL strategic plan goals and objectives. MSL staff benefit by having the resources we need to carry out our work without overextending limited personnel and financial resources. Information systems and the associated resources are clearly justifiable; therefore personnel and financial resources are made available to ensure the long term success of the information systems. MSL partners and patrons benefit by having reliable access to high quality content and services. Montana taxpayers benefit through tax savings associated with appropriate use of IT in government.

Risks: None

Timeframe: Ongoing

Critical success factors:

- Montana State Library complies with the state IT planning cycle;

- MSL's information technology expenditures in this period align with the agency IT plan and the State of Montana Information Technology Plan.

Supporting Objective/Action

ITO 2-2   Participate in IT governance and relevant Communities of Interest

Business driver: MSL must participate in IT governance and collaborate with communities of interest due to limited resources as well as the rapid pace of change in political and technological environments. Because of our size and scope, MSL also has a unique opportunity to influence the development of the state technology environment.

Benefits: MSL will benefit from improved IT management through best practices, peer networking, collaborative problem solving and cost effective IT resource allocation through collaborative purchasing and services development.

Risks: Limited staff means that MSL cannot participate at all levels of IT governance.

Timeframe: Ongoing

Critical success factors:

- Director or agency CIO attendance at ITB, E-Government Advisory Council and MLIAC;
- CIO or Network Administrator attendance at ITMC;
- NRIS Manager attendance at GIS Managers Forum;
- Web Manager attendance at Web Developers meetings;
- Involvement in future IT committees and communities of interest.

Supporting Objective/Action

ITO 2-3   Consult with Department of Administration when evaluating new information systems to support the MSL Strategic Plan

Business Drivers: Overall changes in Library industry and patron expectations may be new to the Department of Administration (DOA), and in some cases at odds with the State IT infrastructure. In these instances communication with DOA is critical to MSL business success.

Benefits: Montana taxpayers benefit through tax savings associated with appropriate use of IT in government. MSL partners and patrons benefit by having access to high quality content and services. MSL staff benefit by having the resources we need to carry out our work.

Risks: Failing to consult with Department of Administration may introduce time delays or additional costs. Compliance with ITSD recommendations may reduce MSL's ability to meet industry standards or patron/partner expectations.

Timeframe for completion: Ongoing

Critical Success Factors:
- Information technology projects receive endorsement or approval by ITSD;
- Solutions are cost effective, timely and meet industry standards as well as patron/partner needs and expectations.

Supporting Objective/Action

ITO 2-4   Comply with all relevant Enterprise IT standards and policies that align with MSL business needs and support MSL programs and services

Business Drivers: MSL must comply with the Montana Information Technology Act.

Benefits: Montana taxpayers benefit through tax savings associated with appropriate use of IT in government. Government employees, library patrons, citizens and businesses benefit by having reliable access to high quality content and services. MSL employees benefit by having an IT infrastructure that is secure and reliable in order to carry out our work.

Risks: Compliance may result in reduced flexibility to meet patron and partner expectations. Noncompliance may result in increased control from ITSD.

Timeframe for completion: Ongoing

Critical Success Factors:
- MSL passes compliance audits;
- MSL is able to negotiate exceptions to Enterprise standards when needed to meet industry requirements or patrons' expectations.

Supporting Objective/Action

ITO 2-5   Implement Project Management as a means to proactively manage information systems and projects

Business Drivers: Limited and/or reduced personnel and financial resources means that MSL must find efficiencies in order to continue to maintain or improve services to meet user demands; project management is a planning and implementation tool that is designed to find and create efficiencies through more effective project planning and oversight.

Benefits: Montana taxpayers benefit through tax savings associated with appropriate use of IT project management in government. MSL partners and patrons benefit by having access to high quality content and services that are more efficiently provided. MSL staff benefit by having the resources we need to carry out our work which is more efficiently managed through project management.

Risks: Project management requires a commitment of already limited personnel time and financial resources however efficiencies to be gained have been shown to outweigh the costs.

Timeframe for completion: Ongoing

Critical Success Factors:
- MSL will purchase a project management tool in FY2010;
- MSL will take steps to integrate current tools including our timesheet database into a project management tool to streamline time management, budget management, and contract reporting;
- MSL will apply project management principles to at least one major project during FY 2011;
- If asked by the ITSD Project Management Office, MSL will participate in a project management advisory committee.

Supporting Objective/Action

ITO 2-6   Proactive management of hardware and software assets

Business Drivers: Proactive management of hardware and software assets is essential to assure continuity of services provided to MSL employees, patrons and partners.

Benefits: Proactive management of hardware and software assets ensures that MSL staff has a stable desktop computing environment as well as a stable, secure data center. MSL partners and patrons benefit by having reliable access to high quality content and services provided through stable information systems. Montana taxpayers benefit through tax savings associated with appropriate management of hardware and software assets.

Risks: Reduced financial resources means that MSL may not have the financial resources necessary to keep up with replacement cycles, maintenance plans or warranties. Some patron services may be compromised if systems go out of warranty.

Timeframe for completion: Ongoing

Critical success factors:

- MSL staff maintain current documentation on all systems and applications;
- MSL staff maintain and review back-up routines monthly;
- MSL staff develop, maintain and test fail-over systems for critical information systems;
- MSL ensures that all business critical hardware and software assets are protected by maintenance plans and warranties;

- MSL replaces hardware on a five-year cycle and software as needed and as budget allows;
- MSL maintains software license compliance across all MSL platforms;
- MSL SAN: FY2010 year-end IT planning includes an alternative for file storage to replace the SAN. Options currently being considered include a combination of onboard disk space and a NAS device or the services provided by the SMDC. This option depends on the availability, timing and cost of services from ITSD;
- MSL 10 Blade Servers: Three new were servers purchased in 2009 which replace the functionality provided by SQL and ArcIMS servers. FY2010 year-end IT planning includes an alternative for web servers currently maintained on blades. Options currently being considered include virtual web servers on hardware owned by MSL or through the services provided by the SMDC. This option depends on the availability, timing and cost of services from ITSD;
- MSLHLNCNTDM01 Server: See SAN;
- MSLHLMSCDS Server: Montana Shared Catalog will replace this server when a new version of Directors Station is released in FY2011;
- Recycle MSLHLNFILEPRN: Replaces MSLHLNMANGE1 (NOD32 Mirror Server) and MSLHLNIMG001 (Symantec Backup Exec Server);
- Adic Tape Library: FY2010 year-end IT planning includes an alternative for tape backups to replace the Adic Tape Library. The option currently being considered is a Network Attached Storage (NAS) device with an onboard tape drive.

Goal Number 3: Expand and improve online information services

ITG 3   Expand and improve online information services

Description: Expand and improve online information services that support MSL programs and services, and the programs and services of MSL patrons, partners and related communities of interest.

Benefits: MSL staff, Montana's libraries, government employees, citizens and businesses obtain high quality information services via the web.

Supports/Implements State IT Goals: 1, 2, 4

Supporting Objective/Action

ITO 3-1   Improve the overall design and usability of MSL websites and services

Business driver: MSL makes available a significant amount of information data and services via the web. The usability of the MSL websites must be carefully considered to ensure that our web presence effectively delivers this information to MSL patrons and partners.

Benefits: MSL staff, Montana's libraries, government employees, citizens and businesses obtain high quality information services via the web no matter their location or means of access.

Risks: Limited MSL staff to manage web presence means that to implement this goal, other MSL priorities may have to be put on hold.

Timeframe: Launch new MSL website by July 2011; develop mobile site with limited application by July 2010.

Critical success factors:

- By July 2011 launch new MSL website that is reorganized to focus on content rather than MSL programs, that makes available multiple means to access MSL information and services and that incorporates web 2.0 technology;

- Review website content and functionality to develop appropriate mobile applications.

Supporting Objective/Action

ITO 3-2   Participate in formal State activities that actively support online service delivery

Business driver: MSL must participate in formal State activities and must collaborate with communities of interest due to limited resources as well as the rapid pace of change in users' expectations for online services. Because of our size and scope, MSL also has a unique opportunity to influence the development of the state web environment.

Benefits: MSL will benefit from improved web management through best practices, peer networking, and collaborative problem solving.

Risks: None

Timeframe: Ongoing

Critical success factors:

- State Librarian or CIO will sit on the E-Government Advisory Council;

- MSL staff will participate in the GIS Manager's Forum;

- MSL staff will participate in the State Web Developer's meetings;

- MSL staff will continue to rely on the Network Advisory Council and the NRIS Advisory Council's expertise to shape MSL online services for our patrons and partners.

Supporting Objective/Action

ITO 3-3   Collaborate with partners on projects and services which increase citizen access to public information and library content

Business driver: MSL patrons and partners demand that information and services be made available via the web. Collaboration with partners will enable us to increase citizen access to public information and library content in ways that is most meaningful to key constituents and in a manner that is most cost effective.
Benefits: MSL will benefit from improved web management through best practices, peer networking, and collaborative problems solving.

Risks: None

Timeframe: Ongoing

Critical success factors:

- MSL and the Montana GIS Federation will increase the amount of data, services and other content discoverable through GIS Portal;

- MSL will continue to digitize legacy print collection (55,00 volumes) and will partner with other state agencies to prioritize publications for digitization;

- MSL will implement a single authentication solution to facilitate access to local and statewide commercial and bibliographic databases for both MSL patrons and library patrons statewide. OCLC's EZ-Proxy solution is currently being piloted for this purpose;

- Facilitate access to local and statewide e-content subscriptions; MSL currently manages contracts with a number of vendors including for this purpose;

- Research and test options to develop a data.mt.gov data portal to provide online access to State of Montana data, databases and online services;

- Focus resources on the creation of web and web mapping services that can be consumed by state and federal agencies, library patrons and other partners;

- In our role as Montana Spatial Data Infrastructure framework assistants, assist natural resource framework stewards to create web mapping services that can be consumed by data users;

- Evaluate online services with an eye to develop mobile applications.

Supporting Objective/Action

ITO 3-4   Provide online interfaces that enable partners to contribute feedback regarding MSL projects and services as well as content to MSL collections

Business driver: MSL patrons and partners use social media to communicate share and discover information. MSL must participate in this environment to remain relevant to patrons and partners.
Benefits: MSL staff, Montana's libraries, government employees, citizens and businesses obtain high quality information services via the web no matter their location or means of access. In the web 2.0 environment, these same constituents have the ability to share information, comment on information, provide feedback to MSL about MSL programs and services, and ask questions and receive information from MSL staff.

Risks: There is some concern regarding the risk to information systems security as a result of the use of web 2.0 technology.

Timeframe: Ongoing

Critical success factors:

- Increase the use of social media that enable user participation in the activities of MSL and that allow for the contribution of user feedback and content.

Supporting Objective/Action

ITO 3-5   Create and deliver web services to serve MSL data and the data of MSL partners

Business driver: MSL patrons and partners, particularly those in state and federal government, rely on web services as a means to cost effectively manage and consume data.
Benefits: MSL staff, Montana's libraries, government employees, citizens and businesses obtain high quality information services via the web.

Risks: There is some concern regarding the risk to information systems security as services are consumed.

Timeframe: Ongoing

Critical success factors:

- MSL will develop common applications and web services to better serve MSL information resources. Examples include a new release of the Montana Digital Atlas application as well as a planned web service for hydrography data;
- MSL will consume web services to better serve MSL information resources. Examples include services made available through GIS shops in state government including those from ITSD/Base Map Service Center.

Goal Number 4: Develop business continuity and security programs

ITG 4   Develop business continuity and security programs

Description: MSL will develop business continuity and security programs that ensure the integrity of MSL data, protect the privacy of patron information and ensure that MSL services will be available in a timely manner in the event of a disaster.

Benefits: MSL staff benefit by having confidence that critical data is maintained and available in the event of information system breakdown. MSL partners and patrons benefit by having reliable access to high quality content and services which are only minimally impacted in the event of information system breakdown. Montana taxpayers benefit through tax savings associated with appropriate use of IT in government which includes appropriate resource management afforded through business continuity and security programs.

Which state strategic goal(s) and/or objective(s) does your goal address? 1, 2, 3, 4

Supporting Objective/Action

ITO 4-1   Implement a NIST-compliant Information System Security Program

Business driver: MSL manages a significant number of information systems that contain and serve proprietary data and/or that provide critical services to MSL partners and patrons around Montana and beyond. Without an information system security program in place, MSL runs the risk of losing data and infrastructure to support these critical services.

Benefits: MSL staff benefit by having confidence that critical data is maintained and available in the event of information system breakdown. MSL partners and patrons benefit by having reliable access to high quality content and services which are only minimally impacted in the event of information system breakdown. Montana taxpayers benefit through tax savings associated with appropriate use of IT in government which includes appropriate resource management afforded through business continuity and security programs.

Risks: Limited MSL staff to manage information system security means that to implement this goal, other MSL priorities may have to be put on hold.

Timeframe: Ongoing

Critical success factors:

- MSL staff receive training to document and mitigate security risks for MSL information systems;

- Beginning with the Montana Shared Catalog, evaluate, document and implement information system security procedures for critical MSL information systems.

Supporting Objective/Action

ITO 4-2   Use D-Plan (http://www.dplan.org/) to develop an agency wide disaster recovery plan

Business driver: MSL manages unique (and in some cases one-of-a-kind) print collections as well as a significant number of information systems that contain and serve proprietary data and/or that provide critical services to MSL partners and patrons around Montana and beyond. A disaster recovery plan is critical to define salvage and recovery priorities and to guide emergency response in the event of a disaster.

Benefits: MSL staff benefit by having confidence that critical collections and data are maintained and available in the event of a disaster. MSL partners and patrons benefit by having reliable access to high quality content and services which are only minimally impacted in the event of disaster. Montana taxpayers benefit through tax savings associated with appropriate use of state resources and IT in government which includes appropriate resource management afforded through a disaster recovery plan.

Risks: Limited MSL staff to manage a disaster recovery plan means that to implement this goal, other MSL priorities may have to be put on hold.

Timeframe: MSL will have a complete disaster recovery plan by July 2010. A disaster recovery team will be trained by December 2010.

Critical success factors:

- MSL collections will be evaluated and rated for salvage priorities;
- MSL staff will be trained regarding how to respond to disasters;
- MSL will collaborate with other similar agencies including the Montana Historical Society Research Center to determine ways to support mutual needs in this area.

Supporting Objective/Action

ITO 4-3   Develop a long-term access solution for unique digital content held by MSL and other Montana libraries

Business driver: MSL and libraries throughout the state manages unique (and in some cases one-of-a-kind) digital collections that must be made permanently available to serve library partners and patrons around Montana and beyond. A long-term access solution is critical to ensure to future availability of these collections.

Benefits: Libraries benefit from knowing that resources are wisely spent and not wasted on potentially ephemeral digital content. Library patrons benefit by having reliable access to high quality digital content which will be available long into the future. Montana taxpayers benefit through tax savings associated with appropriate use of state resources and which includes appropriate resource management afforded through a long-term access solution for digital content.

Risks: Limited staff to educate libraries on the importance of creating and preserving digital "masters" means that to implement this goal, other MSL priorities may have to be put on hold.

Timeframe: On-going

Critical success factors:

- By the spring of 2010 MSL will subscribe to the OCLC Digital Archive to provide a statewide solution for long-term access of digital masters for libraries around the state;

- MSL will continue to rely on archive services provided by digitization partner, the Internet Archive for our long-term access to our digital state publications collection;

- MSL will continue to work with partners including BCR, Inc. to evaluate collaborative opportunities to develop a regional LOCKSS network based on the MetaArchive model.

Goal Number 5: Improve MSL's ability to attract and retain a qualified IT workforce

ITG 5   Improve MSL's ability to attract and retain a qualified IT workforce.

Description: The agency will take steps to improve recruitment and retention of IT personnel.

Benefits: MSL's IT staff benefit through opportunities for career growth, learning, and professional development. Employees are recognized, valued, and respected for the contributions they make and are compensated fairly for their work. MSL also benefits through a decreases in employee turnover and loss of organizational knowledge.   And critical MSL information systems areas are managed with cross-trained support.
Supports/Implements State IT Goals : 1,3

Supporting Objective/Action

ITO 5-1   Use IT staff in ways that support the MSL Strategic Plan and promote opportunities for collaboration and cross-training both among internal colleagues as well as with MSL partners

Business Drivers: MSL must increase efficiencies through creative opportunities for collaboration and cross-training due to shortage of FTE in IT support.

Benefits: MSL benefits from backup support for critical functions and from efficiencies gained by pooling talents. MSL patrons benefits by having reliable access to MSL programs and services that is not impacted by insufficient IT support.

Risks: Current organizational funding model inhibits cross program collaboration.

Timeframe for completion: Ongoing

Critical Success Factors:

- Best practices for documentation, services architecture and other components for successful IT support become institutionalized;

- Staff report a benefit from increased opportunities for collaboration among IT personnel;

- Staff and patrons report benefit from improved responsiveness to IT service requests.

Supporting Objective/Action

ITO 5-2   Develop MSL IT staff through investment in training and professional development. Implement training plans for employees that align with MSL's projected information system needs.

Business Drivers: MSL often finds it difficult to retain IT employees particularly due to low wages compared to market rates; staff turnover results in loss of organizational knowledge, slow response to IT service requests and inability to pursue MSL goals and objectives that have significant IT components.

Benefits: Opportunities for training and professional development are positive rewards and incentives for staff in lieu of financial compensation. Professional development and training often leads to greater opportunities for collaboration and to find work efficiencies.
Risks: MSL may not have financial resources to provide training opportunities for all IT workers. MSL may not be a large enough agency to implement competency-based pay or career ladders for IT employees.

Timeframe for completion: Ongoing

Critical Success Factors:
- MSL IT staff complete a minimum of one training course and/or attend at least one professional conference that supports MSL programs and services annually;
- Annual performance reviews document training plans;
- MSL programs and services benefit from reduced employee turnover.

SECTION 5: IT INITIATIVES (FY2010 – FY 2015)

5.1 IT Initiatives

Initiative 1 - Title: **State Publications Digitization Project**

Description: By the end of FY10 MSL will have spent approximately $100,000 on a long-term project to digitize our legacy print state publications collection. To date these funds have been found within the existing MSL budget. By creating online access to these digital files through the library catalog and major search engines like Google access to state government information is substantially increased and the print copies are protected from further damage or loss. The Montana State Librarian is considering an EPP request for $680,000 to digitize the complete legacy print collection.

These expenditures includes funding for two contract FTE to support in-house management of the digitization project, shipping costs to ship print documents to a contract digitization vendor via the state contracted shipper and contract costs to pay for the digitization of approximately 40,000 remaining print state publications.

This initiative is directly tied to MSL IT Goal 3: Expand and improve online information services.

EPP Number (if applicable):   Pending.

SECTION 6: ENTERPRISE ALIGNMENT

6.1 State Strategic Plan for IT Alignment

Please indicate which Communities of Interest your agency plans to be involved in. Agencies are asked to select at least one, but can select as many as needed. Further planning work by the communities of interest will take place following submission of agency IT plans.

☒ Government Services
☐ Public Health
☐ Human Resources
☒ Environmental
☒ Education
☐ Economic
☒ Cultural Affairs
☐ Finance

Because of our mission to provide library services to Montana state employees as well as access to government information to all Montanans, MSL essentially supports all of these communities of interest and we are pleased to make ourselves available in this capacity. Specifically, the MSL State Publications Digitization initiative supports all communities of interest because the content contained in the State Publications collection reflects each of these communities. By digitizing state publications, information will be readily available to support work conducted by these communities of interest. Furthermore, MSL will make publicly available, any state publications produced by these communities of interest.

Additionally, MSL staff are currently developing web mapping services that serve a variety of GIS data that would support the work of the communities of interest indicated.

SECTION 7: EXPENDITURES

7.1 Planned Agency IT Expenditures

Expense Category	FY2010		FY2011		FY2012		FY2013		FY2014		FY2015
Personal Services*	802,996		810,357		834,668		859,708		885,499		912,064
Operating Expenses	388,680		394,457		400,321		406,273		412,314		418,445
Initiatives	30,000		30,000		680,000						
Other expenditures **	619,471		528,709		538,208		548,367		557,688		568,176
Totals	1,841,147		1,763,523		2,453,197		1,814,348		1,855,501		1,898,685

* Includes a projected 3% salary increase FY12-FY15

** Includes both private funds that "pass through" the MSL budget for IT expenditures as well as e-Content purchases. See the Executive Summary for further information on e-Content.

SECTION 8: ENTERPRISE IT INVENTORY

8.1 Inventory Update

Has the Agency updated their IT Inventory Database as outlined in Section 8 of the instructions? Yes.

Date that Agency last updated their IT Inventory: February 2010.

SECTION 9: ADDITIONAL INFORMATION - OPTIONAL

Over the next two years, MSL will undertake a review and update of our strategic plan: Montana State Library Strategic Plan 2006-2011; as the goals and objectives of the agency changes, so too will our IT objectives. Those changes will be reflected in future updates to this document.